

April 02, 2007

REMARKS

Claims 1-8 stand pending in the instant application.

Responses to Claim Rejections

Instant claims 1-8 stand rejected under 35 USC 103(a) as being unpatentable over Cruz, US Patent Publication 2002/0193521 (Cruz), in view of Beall et al., U.S. Patent No. 5,552,469 (Beall et al.), both of record. The Applicants respectfully traverse this rejection.

As the rejection admits, Cruz fails to disclose clay nanoparticles, as are instantly recited, and Beall et al. fails to disclose polymeric nanoparticles (PNPs), as are instantly recited.

Contrary to the position taken in the Office Action, the instantly recited PNPs, as well as the polymers of Cruz, are internally crosslinked by polymerization of a multi-ethylenically unsaturated monomer, as instantly recited. See, for example, Cruz at the Abstract and paragraph [0015]-[0016] and instant claim 1. Because the rejection ignores the effect of and the existence of multi-ethylenically unsaturated monomers in Cruz, the office action improperly reads Beall et al. as disclosing polymers overlapping with Cruz. Crosslinking is a critical distinction between the polymers of Cruz and the polymer intercalants of Beall et al. In fact, the crosslinked polymers of Cruz are not contemplated by Beall et al., who suggest only water soluble polymers that can be "sorbed" by the clay. See Beall et al. at Abstract, column 3, lines 27-34, column 7, lines 11-16, and column 9, line 33 to column 12, line 67. Accordingly, at the very least, there is no teaching or suggestion in the art to combine Beall et al. and Cruz. Moreover, reading Beall et al. as a whole, there is no reasonable expectation that that the invention of Beall et al. can work with the polymers of Cruz or with the PNPs instantly recited. In fact, Beall et al. teaches that mixing crosslinked copolymers, such as those of Cruz, with clay would be expected to be inoperative to "sorb" or intercalate clay. See Beall et al. at the Abstract and at col. 7, line 58 to column 8, line 17. Accordingly, the combination as set forth in the rejection is improper.

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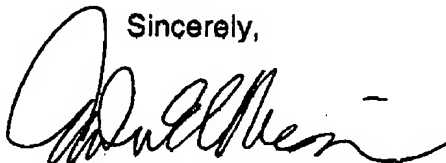
For these reasons, the rejections combining Beall et al. and Cruz as set forth in the rejection should be withdrawn.

CONCLUSION

Based on the foregoing, it is submitted that the instant claims are currently in condition for allowance. An early and favorable action on the merits is earnestly solicited. If the Examiner has any questions or concerns, she is urged to contact the undersigned at her earliest convenience.

If any fees are found owing, please charge applicant's deposit account number 18-1850.

Sincerely,

A handwritten signature in black ink, appearing to read 'A. E. C. Merriam', written in a cursive style.

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